

**WE CLAIM:**

1. A cooling system for components of a computer tomography system arranged in a gantry housing, comprising:

a cooled air feed device including:

an air compressor operable to compress air; and

streaming elements connected to receive the compressed air from said air compressor and disposed and formed such that the compressed air flows onto the components to be cooled.

2. A cooling system according to claim 1, wherein said air compressor is one of disposed in the computer tomography system and adjacent to the computer tomography system, said air compressor being operable to accept and compress ambient air.

3. A cooling system according to claim 1, further comprising:  
a cooling device connected to receive the compressed air to cool the compressed air.

4. A cooling system according to claim 1, further comprising:  
lines connected between said air compressor and said streaming elements to conduct the compressed air so said streaming elements; and  
heat insulation at least along sections of said lines.

5. A cooling system according to claim 1, further comprising:  
an annular carrier ring in or on which at least one of the components to be cooled is arranged, said annular carrier ring being rotatable around a measurement space in the gantry housing; and  
at least one exhaust element mounted stationarily and disposed in or on the gantry housing through which the compressed air flows onto the components passing said at least one exhaust element upon a rotation of the carrier ring.

6. A cooling system according to claim 5, wherein said at least one exhaust element is a nozzle ring.

7. A cooling system according to claim 6, wherein said nozzle ring is arranged in a radial inner region of the gantry housing such that the compressed air flows substantially radially outwards onto the components to be cooled that are in or on said carrier ring.

8. A cooling system according to claim 1, further comprising:  
a plurality of nozzle plates arranged at predetermined circumferential positions in or on the gantry housing.

9. A cooling system according to claim 8, wherein said carrier ring, under formation of an angle profile running annularly around a rotation axis, includes an annularly rotating first surface with flow-through openings; and an axially extending annularly rotating second surface arranged on a radially outer end of said first surface;  
said nozzle plate being arranged in the gantry housing such that said first surface of said carrier ring passes close to said nozzle plates upon rotation such that the compressed air flows through the flow-through openings onto the components to be cooled arranged in said carrier ring.

10. A cooling system according to claim 1, further comprising:  
a second surface of said carrier ring defining flow-through openings through which heated air escapes essentially radially outwards from said carrier ring into the gantry housing.

11. A cooling system according to claim 1, further comprising:  
nozzle heads arranged and fashioned such that the compressed air is guided directly to stationary arranged components inside the gantry housing.

12. A cooling system according to claim 1, wherein said gantry housing defines exhaust openings through which heated air escapes outwards.

13. A cooling system according to claim 1, further comprising:  
an exhaust device operable to draw heated air from the gantry housing.

14. A cooling system according to claim 13, wherein said exhaust device includes at least one blower.

15. A cooling system according to claim 14, further comprising:  
two coaxial bearings on two opposite sides on a stationary part of the computer tomography system by which the gantry housing is positioned around an axis, the cooling system being fashioned such that the heated air in a region of at least one of the bearings is guided out of the gantry housing in the stationary part.

16. A cooling system according to claim 1, further comprising:  
a dehumidifier upstream from said streaming elements.

17. A computer tomography system with a cooling system, comprising:  
a gantry housing;  
components of the computer tomography system arranged in said gantry housing;  
a cooled air feed device including:  
an air compressor operable to compress air; and  
streaming elements connected to receive the compressed air from said air compressor and disposed and formed such that the compressed air flows onto the components to be cooled.

18. A method to cool components of a computer tomography system arranged in an annular gantry housing, comprising the steps of:  
compressing air; and  
guiding the compressed air onto the components of the computer tomography system to be cooled.

19. A method according to claim 18, comprising the step of:  
cooling the compressed air.

20. A method according to claim 18, further comprising the step of:  
exhausting heated air from the gantry housing.

21. A method according to claim 19, further comprising the step of:  
dehumidifying the compressed air.